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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/591,646	03/24/2009	**Patrick Kaltenbach**	20031343-03	3281

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Agilent Technologies, Inc. in care of:
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EXAMINER	
HOLLINGTON, JERMELE M	
ART UNIT	**PAPER NUMBER**
2858	

NOTIFICATION DATE	DELIVERY MODE
05/02/2011	ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

IPOPS.LEGAL@agilent.com
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Office Action Summary	Application No.	Applicant(s)	
	10/591,646	KALTENBACH ET AL.	
	Examiner	Art Unit	
	Jermele M. Hollington	2858	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *05 September 2006*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-5 and 7-29* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-5,7,8,13-16,18,19 and 22-29* is/are rejected.

7)☒ Claim(s) *9-12, 17, 20, and 21* is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date *09/2006*
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____

DETAILED ACTION

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. Claims 1-5, 7-8, 13-16, 18-19 and 22-29 are rejected under 35 U.S.C. 102(b) as being anticipated by Goor et al (20030222664).

Regarding claims 1 and 22, Goor et al disclose [see Figs. 1a-4] a contactless detection cell (chamber 10) for detecting an electrical property of one or more sample compounds [not shown] in a flow path, said contactless detection cell (10) comprising: a detection channel (substrate 20) arranged in the flow path; a transmitter electrode (18s) adapted for capacitively coupling an AC current into the detection channel; a receiver electrode (electrode 18r) adapted for receiving the AC current that has been coupled into the detection channel (20); wherein an inner cross-section in at least a section of the detection channel (20) is different than an inner cross-section of the flow path towards the detection channel (20), and wherein, at respective sites of the detection channel (20) where the transmitter electrode (18s) and the receiver electrode (18r) are located, the detection channel's (20) inner cross-section is larger than the detection channel's (20) inner cross-section in a portion between the electrodes (18s and 18r).

Regarding claim 2, Goor et al disclose the inner cross-section of the detection channel (20) is narrowed between the electrodes (18s and 18r) in a way that the electrical resistance of

the sample volume between the transmitter electrode (18s) and the receiver electrode (18r) is increased.

Regarding claim 3, Goor et al disclose wherein the transmitter electrode (18s) and the receiver electrode (18r) are separated from each other along an axis of the flow path.

Regarding claim 4, Goor et al disclose wherein the axial separation between the electrodes (18s and 18r) is sufficiently large for avoiding or at least reducing cross-coupling between the transmitter electrode (18s) and the receiver electrode (18r).

Regarding claim 5, Goor et al disclose wherein within the entire detection channel (20), the inner cross section of the detection channel (20) is kept small.

Regarding claim 7, Goor et al disclose wherein the detection channel (20) comprises a geometry being axially varied in a way that an hour-glass shaped geometry of the detection channel (20) is obtained.

Regarding claim 8, Goor et al disclose wherein the detection channel (20) is implemented by means of a capillary with a reduced inner cross-section in the portion between the transmitter electrode (18s) and the receiver electrode (18r).

Regarding claims 13 and 23, Goor et al disclose wherein the electrical property is at least one of: conductivity, complex conductivity, impedance, resistance, reactance, relative permittivity [see paragraph [0005] for details].

Regarding claims 14 and 24, Goor et al disclose the detection cell (10) is adapted for detecting conductivity of the sample compounds [see paragraph [0005] for details].

Regarding claims 15 and 25, Goor et al disclose wherein the one or more sample compounds have been separated in a preceding separation flow path [see paragraph [0005] for details].

Regarding claim 16, Goor et al disclose the inner cross-section of the detection channel (20) is smaller than the inner cross-section of the flow path towards the detection channel (20).

Regarding claims 18 and 26, Goor et al disclose the transmitter electrode (18s) and the receiver electrode (18r) being separated along an axis of the flow path; and the inner cross-section of the detection channel (20) between the transmitter electrode (18s) and the receiver electrode (18r) is smaller than the inner cross-section of the separation flow path.

Regarding claim 19, Goor et al disclose a separation system comprising a separation flow path adapted for separating sample compounds of a given sample; a contactless detection cell (chamber 10) for detecting an electrical property of one or more sample compounds in the flow path, said contactless detection cell (10) comprising: a detection channel (substrate 20) arranged ,in the flow path; a transmitter electrode (18s) adapted for capacitively coupling an AC current into the detection channel; a receiver electrode (electrode 18r) adapted for receiving the AC current that has been coupled into the detection channel (20); wherein an inner cross-section in at least a section of the detection channel (20) is different than an inner cross-section of the flow path towards the detection channel (20), and wherein, at respective sites of the detection channel (20) where the transmitter electrode (18s) and the receiver electrode (18r) are located, the detection channel's (20) inner cross-section is larger than the detection channel's (20) inner cross-section in a portion between the electrodes (18s and 18r).

Regarding claim 27, Goor et al disclose wherein the electrical resistance of the sample volume between the transmitter electrode (18s) and the receiver electrode (18r) is increased by narrowing the inner diameter of the detection channel (20) between the electrodes (18s and 18r).

Regarding claim 28, Goor et al disclose wherein the detection channel's (20) volume is reduced while keeping the distance between the electrodes (18s and 18r) sufficiently large for avoiding or at least reducing cross-coupling between the transmitter electrode (18s) and the receiver electrode (18r).

Regarding claim 29, Goor et al disclose comprising increasing the capacitive coupling between the electrodes (18s and 18r) and the detection channel (20) by increasing the detection channel's (20) inner diameter at the sites of the detection channel where the transmission electrode (18s) and the receiver electrode (18r) are respectively located.

Conclusion

3. Claims 9-12, 17 and 20-21 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

4. The following is a statement of reasons for the indication of allowable subject matter: regarding claim 9, the primary reason for the allowance of the claims is due to the portion of the detection channel between the electrodes, the inner diameter of the capillary is equal to about 0.1 μm to 200 μm, preferably 1.0 μm to 20 μm.

Regarding claim 10, the primary reason for the allowance of the claims is due to the portion of the detection channel between the electrodes, the ratio of the capillary's outer diameter to the capillary's inner diameter is equal to about 1.1 to 50, preferably 1.5 to 10.

Regarding claim 11, the primary reason for the allowance of the claims is due to the detection channel shape is implemented using microstructuring technologies as common for making microfluidic chip devices.

Regarding claim 17, the primary reason for the allowance of the claims is due to the inner cross-section of the detection channel is greater than the inner cross-section of the flow path towards the detection channel.

Regarding claim 20, the primary reason for the allowance of the claims is due to the separation system is at least one of: an electrophoresis system, a liquid chromatography system, an electrochromatography system, or a combination thereof.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jermele M. Hollington whose telephone number is (571) 272-1960. The examiner can normally be reached on M-F (9:00-4:00 EST) First Friday Off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Huy Phan can be reached on (571) 272-7924. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Jermele M. Hollington/
Primary Examiner
Art Unit 2858

/J. M. H./
April 25, 2011